Grain Retention
Every Kernel Counts
10 Steps to help you put more bushels in the bin
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Increased yields and extreme harvests demand efficient crop flow and exceptional grain retention to maximize profits. We’re continuously improving our harvesting method. With industry leading grain retention, and reduced bounce and shatter at higher harvesting speeds, we work hard to set the standards by which other cornheads are measured.

Here is a look at a few of the upgrades we’ve made to our Elite XL series, along with some simple steps you can take to get the most from your equipment at harvest time.

1. Deck Plate Spacing

Proper spacing of the deck plates is necessary to reduce the risk of butt shelling and cob loss during harvest, and is something you can easily monitor from your combine. Ideally, the deck plate spacing will allow the stalk to pass through freely while snapping the ear from the stalk at the “butt” of the ear. Deck plates that are too narrowly spaced may lead to more stalk material entering the combine, while wider spacing may cause smaller ears to drop below the deck plates, increasing loss.

If you see butt shelling, your deck plates may be set too wide for your current ear size and could be catching the “shoulder” of the ear instead of the “butt.”

Observation is key, and you’ll have to adjust your deck plates frequently as your harvesting conditions change. Refer to your operator’s manual to determine correct settings for your cornhead and combine.

2. Header Speed

Crop conditions, moisture levels and corn varieties can vary from field to field, so it’s critical that you can adjust your harvesting approach quickly, to meet these variable conditions. Because Geringhoff allows the combine operator to monitor true header speed, it is possible to make quick adjustments to your header speed to meet harvest conditions. Matching header speed to ground speed can make a huge impact on reducing header losses.

3. Stalk Rolls

Make sure your stalk rolls are adjusted correctly and are sharp enough to grab the stalk and pull it to the deck plates without slipping. NorthStar knife rolls should have a 1-2 mm clearance at the front of the row unit for easy entry and .5 mm at the rear. This will provide the correct “snapping” action while processing the stalk material effectively. Geringhoff uses high grade, self-sharpening components to extend the life and efficiency of the stalk rolls and cutting discs, but over time these parts will wear and become less efficient. Take time to inspect your stalk rolls and cutting components for routine wear, to ensure you are getting optimal performance at harvest.

4. Chain Guide Adjustment

Geringhoff row units allow the operator to adjust the position of the gathering chain guides in a narrow position where the lugs will overlap (most aggressive) or in a wide position (normal operation). In good standing corn, the guides should be in the wide position to allow the stalks to reach the rolls before coming in contact with the chain lugs. In a “down” corn situation, the chain guides should be moved to their more aggressive, narrow position. These adjustment options are outlined in the Geringhoff Owner’s Manual.

5. Row Unit Height

In high yield corn, a staggering volume of plant material is processed by your cornhead. Maintaining optimal crop flow is a constant challenge, and is something we’re constantly monitoring with our field specialists.

Our Elite XL cornheads feature row units that are positioned slightly higher than previous models, which is an adjustment we’ve made to create a more aggressive pitch into the auger trough, to optimize crop flow in high density corn. This adjustment also increases auger trough volume by approximately 20% to handle high yielding crops.

6. Wrapping Issues

BT corn genetics produce thicker stalks, taller plants and increase the sheer volume of fodder you have to process during harvest. These factors can increase the frequency of plants (and weeds) wrapping around your auger. If left unchecked, these wrapping issues can cause crop flow restrictions and
To prevent wrapping, we’ve designed an adjustable stripper plate for the Elite XL that runs the length of the auger trough, and can be adjusted to within millimeters of your auger. As a result, you’ll experience improved crop flow, and a cleaner auger.

This modification transitions your crop smoothly into the feederhouse and maximizes grain retention.

7. Moisture

Harvest timing can be one of the biggest challenges for corn growers given the demands of weather, variation in hybrid characteristics, and grain handling capabilities. Picking the right time to harvest, based on your corn’s moisture content can have a big impact on yield retention.

Corn with approximately 20% moisture content at the time of harvest shows higher yield retention as compared to corn that falls below this moisture content.

While fuel costs and labor involved in drying corn down from higher moisture levels is a consideration, you may notice that these costs are recovered due to less field loss, and kernel damage during harvest.

Research indicates that corn harvested below 20% will have a higher degree of broken kernels. Broken kernels are the primary cause of poor grain quality.

Damaged shelled corn also deteriorates three times faster than undamaged corn, so it’s important to harvest corn at the optimal balance between low enough moisture to not cause kernel damage, and increased fuel costs associated with drying your crop. While not as immediately apparent as grain loss in the field, waiting too long to harvest may present a more subtle form of grain loss, due to damaged kernels, increased risk of kernel mold, and other damage that renders your crop less valuable.

Reviewing these inputs are good practice toward maximizing profitability in your operation, and are considerations that deserve your attention, and experimentation.

8. Boiling

In extreme yields, the sheer volume of grain moving through the auger trough can create a “boiling” effect in front of the feeder house.

To assist with yield retention during grain transfer, we’ve added a splash plate to the Elite XL in order to reduce opportunities for the crop to escape when back feeding occurs at the feeder house. The addition of the splash plate captures much of the grain that could otherwise be lost, should the feeder house throw ears forward.

9. Smooth Crop Transition

By modifying our Elite XL cover plate design, crops are less likely to shatter. We’ve created a seamless transition from deck plates to auger trough that allow crops to quickly enter the auger trough and flow smoothly to the feederhouse, resulting in improved kernel retention in high-yielding conditions.

10. Keep Your Separator Full

Combines perform more efficiently when the separator is kept full. Is your harvest header delivering a sufficient volume of crop to the combine? Many of today’s larger capacity combines have throughput demands, well in excess of what the traditional 12 row header might be able to provide. Many combine operators recognize this and increase their ground speed in attempt to keep the combine full. This increased speed often results in increased shatter and bounce, excess fuel consumption, a rough harvest for the combine and a lot of stress on the driver. The best strategy might be to invest in a larger 16, 18 or 24 row head.

To share your experience, please email experience@geringhoff.com